

**In the Claims:**

Please amend the claims as follows:

**Claim 1. (Currently Amended)** An ultraviolet fluorescence detector comprising:

- an excitation light source;
- a sample receiving platform capable of receiving excitation light from said excitation light source;
- a first optics for directing said excitation light to said sample receiving platform;
- an ultraviolet light detector for receiving induced fluorescent energy; ~~and~~
- an analysis module for matching said induced fluorescent ultraviolet energy against a previously determined signature spectrum; ~~and~~
- a camera platform; and
- an input optic for passing the induced fluorescent energy to said ultraviolet light detector,

wherein the input optic is an F/2 lens having a diameter over approximately 1.0 meters.

**Claims 2-3. (Canceled).**

**Claim 4. (Previously Presented)** The ultraviolet fluorescence detector of claim 1, wherein said first optics includes at least one of an optical lens, a shutter, a filter, a mirror, a fiber optic coupler and an optical fiber.

**Claim 5. (Original)** The ultraviolet fluorescence detector of claim 4, wherein said filter is a filter wheel.

**Claims 6-7. (Canceled).**

- Claim 8. (Currently Amended)** The ultraviolet fluorescence detector of claim 6 1, further comprising a second optic for receiving said induced fluorescent energy.
- Claim 9. (Original)** The ultraviolet fluorescence detector of claim 8, wherein said second optic includes at least one of a mirror, a lens, a beam splitter, a shutter, a fiber optic fiber, a fiber optic coupler, a filter and an input slit.
- Claim 10. (Previously Presented)** The ultraviolet fluorescence detector of claim 9, wherein said filter is a filter wheel.
- Claim 11. (Original)** The ultraviolet fluorescence detector of claim 1, wherein said ultraviolet light detector includes a spectrograph.
- Claim 12. (Original)** The ultraviolet fluorescence detector of claim 1, further comprising a CCD detector.
- Claim 13. (Original)** The ultraviolet fluorescence detector of claim 10, wherein said CCD detector is cooled.
- Claim 14. (Original)** The ultraviolet fluorescence detector of claim 1, wherein said analysis module includes a computer.
- Claim 15. (Original)** The ultraviolet fluorescence detector of claim 1, further comprising a signal processor.
- Claim 16. (Previously Presented)** The ultraviolet fluorescence detector of claim 1, further comprising at least one power source providing power to said excitation light source, said sample receiving platform, said ultraviolet light detector and said analysis module.

**Claim 17. (Original)** The ultraviolet fluorescence detector of claim 1, wherein said excitation light source includes at least one of a tunable laser, a flash lamp, an ultraviolet LED and a solid state ultraviolet diode.

**Claim 18. (Original)** The ultraviolet fluorescence detector of claim 1, wherein said excitation light source includes a laser source of approximately 0.1 to approximately 250 millijoules.

**Claim 19. (Original)** The ultraviolet fluorescence detector of claim 1, wherein the excitation light source is a pulsed light source.

**Claim 20. (Original)** The ultraviolet fluorescence detector of claim 1, further comprising a controller that monitors said excitation light source for the purpose of detected substance spectrum stabilization.

**Claim 21. (Original)** The ultraviolet fluorescence detector of claim 1, wherein ultraviolet fluorescence detector detects ultraviolet signals between approximately 240 nanometers and approximately 540 nanometers.

**Claim 22. (Original)** The ultraviolet fluorescence detector of claim 1, further comprising a light minimizing enclosure.

**Claim 23. (Original)** The ultraviolet fluorescence detector of claim 22, wherein said light minimizing includes a reflective spherical surface.

**Claim 24. (Original)** The ultraviolet fluorescence detector of claim 1, further comprising a handheld scanner.

**Claim 25. (Original)** The ultraviolet fluorescence detector of claim 24, wherein said hand held scanner connect to said ultraviolet fluorescence detector via fiber optic materials.

**Claim 26. (Original)** The ultraviolet fluorescence detector of claim 1, wherein said ultraviolet fluorescence detector can detect ultraviolet emissions from a chemical compound.

**Claim 27. (Original)** The ultraviolet fluorescence detector of claim 23, wherein said chemical compound includes at least one of a drug, an explosive, a biological agent, a biochemical agent, a nuclear material, a narcotic material, a petroleum material and a waste material.

**Claim 28. (Previously Presented)** A method for detecting and analyzing chemical substances using ultraviolet fluorescence comprising the steps of:

directing an excitation light source to a target material;

receiving induced fluorescent energy from said target material; and

determining the nature of the target material based upon the received induced fluorescent energy;

wherein the said step of directing includes directing excitation light through first optics that include at least one of an optical lens, a shutter, a filter, a mirror, a fiber optic coupler and an optical fiber; and

wherein the received induced fluorescent energy has passed through an optic having an F/2 mirror and is at least approximately 1.0 meters in diameter.

**Claims 29-30. (Canceled).**

**Claim 31. (Previously Presented)** The method of claim 28, wherein said step of determining includes comparing parameter ranges for said received induced fluorescent energy with predetermined ultraviolet parameters and defining a match based on a predetermined standard deviation between said received induced fluorescent energy and predetermined ultraviolet parameters.

**Claim 32. (Previously Presented)** An ultraviolet fluorescence detector comprising:  
an excitation light source;  
a sample receiving platform capable of receiving excitation light from said excitation light source;  
an ultraviolet light detector for receiving induced fluorescent energy;  
an analysis module for matching said induced fluorescent ultraviolet energy against a previously determined signature spectrum; and  
an input optic for passing the induced fluorescent energy to said ultraviolet light detector wherein the input optic is an F/2 lens having a diameter over approximately 1.0 meters.

**Claim 33. (Previously Presented)** The ultraviolet fluorescence detector of claim 32, further comprising a second optic for receiving said induced fluorescent energy; wherein said second optic includes at least one of a mirror, a lens, a beam splitter, a shutter, a fiber optic fiber, a fiber optic coupler, a filter and an input slit.

**Claim 34. (Previously Presented)** The ultraviolet fluorescence detector of claim 33, wherein said filter is a filter wheel.

**Claim 35. (Previously Presented)** The ultraviolet fluorescence detector of claim 32, further comprising a CCD detector.

**Claims 36-37. (Canceled).**

**Claim 38. (Previously Presented)** An ultraviolet fluorescence detector comprising:  
an excitation light source;

a sample receiving platform capable of receiving excitation light from said excitation light source;

an ultraviolet light detector for receiving induced fluorescent energy;

an analysis module for matching said induced fluorescent ultraviolet energy against a previously determined signature spectrum; and

a controller that monitors said excitation light source for the purpose of detected substance spectrum stabilization.

**Claim 39. (Currently Amended)** The ultraviolet fluorescence detector of claim ~~36~~ 38, further comprising a handheld scanner.

**Claim 40. (Currently Amended)** An ultraviolet fluorescence detector comprising:

an excitation light source;

a sample receiving platform capable of receiving excitation light from said excitation light source;

a first optics for directing said excitation light to said sample receiving platform;

an ultraviolet light detector for receiving induced fluorescent energy;

an analysis module for matching said induced fluorescent ultraviolet energy against a previously determined signature spectrum; ~~and~~

at least one power source providing power to said excitation light source, said sample receiving platform, said ultraviolet light detector and said analysis module; and

a controller that monitors said excitation light source for the purpose of detected substance spectrum stabilization.

**Claim 41. (Previously Presented)** The ultraviolet fluorescence detector of claim 40, wherein said excitation light source includes a laser source of approximately 0.1 to approximately 250 millijoules.

**Claim 42. (Previously Presented)** The ultraviolet fluorescence detector of claim 40, wherein the excitation light source is a pulsed light source.

**Claim 43. (Canceled).**

**Claim 44. (Previously Presented)** The ultraviolet fluorescence detector of claim 40, further comprising a light minimizing enclosure.

**Claim 45. (Currently Amended)** The ultraviolet fluorescence detector of claim 45 44, wherein said light minimizing includes a reflective spherical surface.

Please add the following claims:

**Claim 46. (New)** An ultraviolet fluorescence detector comprising:

- an excitation light source;
- a sample receiving platform capable of receiving excitation light from said excitation light source;
- a first optics for directing said excitation light to said sample receiving platform;
- an ultraviolet light detector for receiving induced fluorescent energy;
- an analysis module for matching said induced fluorescent ultraviolet energy against a previously determined signature spectrum;
- a camera platform; and

a controller that monitors said excitation light source for the purpose of detected substance spectrum stabilization

**Claim 47. (New)** An ultraviolet fluorescence detector comprising:

- an excitation light source;
- a sample receiving platform capable of receiving excitation light from said excitation light source;
- a first optics for directing said excitation light to said sample receiving platform;
- an ultraviolet light detector for receiving induced fluorescent energy;
- an analysis module for matching said induced fluorescent ultraviolet energy against a previously determined signature spectrum;
- a camera platform; and
- a light minimizing enclosure, wherein said light minimizing includes a reflective spherical surface.

**Claim 48. (New)** An ultraviolet fluorescence detector comprising:

- an excitation light source;
- a sample receiving platform capable of receiving excitation light from said excitation light source;
- a first optics for directing said excitation light to said sample receiving platform;
- an ultraviolet light detector for receiving induced fluorescent energy;
- an analysis module for matching said induced fluorescent ultraviolet energy against a previously determined signature spectrum;



at least one power source providing power to said excitation light source, said sample receiving platform, said ultraviolet light detector and said analysis module; and  
a light minimizing enclosure, wherein said light minimizing includes a reflective spherical surface.